CLAIMS

What is claimed is:

1.   A method for generating a set of instructions to guide a driver along a route, wherein the route comprises a first node, a second node, a third node, a first road coupled to the first node, a second road coupled between the first node and the second node, and a third road coupled between the second node and the third node, and a fourth road coupled to the third node, and wherein the method comprises the steps of:

generating a first instruction operative to guide the driver from the first road, through the first node, and onto the second road;

generating a second instruction operative to guide the driver from the second road through the second node, and onto third road; and

combining the first instruction and the second instruction into a combined instruction operative to guide the driver from the first road, through the first node, through the second road, through the second node, and onto the third road.

2.   The method of Claim 1, wherein the first instruction has a first number of words, the second instruction has a second number of words, and the combined instruction has fewer words than the sum of the first number and the second number.

3.   The method of Claim 1, further comprising the step of generating a third instruction operative to guide the driver from the third road, through the third node, and onto the fourth road, wherein

the combining step comprises combining the first instruction, the second instruction, and the third instruction into a combined instruction operative to guide

the driver from the first road, through the first node, through the second road, through the second node, though the third road, through the third node, and onto the fourth road.

4.   The method of Claim 1, wherein the route further comprises a series of nodes and roads, and the method further comprises the steps of:

sequentially processing each node in the series;

generating a set of instructions on the basis of the sequentially processing step;

sequentially reprocessing each node in the series; and

responsive to the sequentially reprocessing step, refining the set of instructions.

5.   The method of Claim 4, wherein the step of generating a set of instructions comprises generating an initial set of instructions on the basis of the sequentially processing step, and wherein the refining step comprises responsive to the sequentially reprocessing step, refining the initial set of instructions to provide a refined set of instructions, and wherein the initial set of instructions has a greater number of instructions than the refined set.

6.   The method of Claim 1, wherein the combining step comprises if the distance between the first node and the second node is less than a threshold, combining the first instruction and the second instruction into a combined instruction operative to guide the driver from the first road, through the first node, through the second road, through the second node, and onto the third road.

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7. The method of Claim 1, further comprising the step of generating a driving itinerary that comprises the combined instruction.

8.   A method for composing a set of driving instructions for a route, wherein the route comprises a series of components, and wherein the method comprises the steps of:

sequentially processing each component in the series of components;

5   generating a set of driving instructions wherein each instruction corresponds to at least one of the components; and

reducing a size of the set of driving instructions.

9.   The method of Claim 8, wherein the reducing step comprises
10   generating a combined instruction for at least two adjacent components in the series of components.

10.   The method of Claim 8, wherein the series of components comprises at least two adjacent intersections and wherein the reducing step comprises
15   composing a combined instruction for the two adjacent intersections.

11.   The method of Claim 8, wherein the generating step comprises generating a first set of driving instructions wherein each instruction corresponds to at least one of the components, and wherein
20   the reducing step further comprises generating a second set of driving instructions by sequentially reprocessing each component in the series, wherein the number of driving instructions in the first set is greater than the number of driving instructions in the second set.

12.   The method of Claim 8, wherein the route further comprises an intersection between an entry road, an exit road, and an intervening road, and wherein:

the entry road leads into the intersection at an entry heading;

5   the intervening road leads out of the intersection at a first heading;

the exit road leads out of the intersection at a second heading, and the method further comprises the steps of:

determining if the first heading deviates from the entry heading less than a threshold; and

10   responsive to the determining step, including an instruction for the intersection in the set if the first heading deviates from the entry heading less than the threshold.

13.   The method of Claim 8, wherein the route further comprises an
15   intersection between an entry road, an exit road, and an intervening road, wherein:

the entry road leads into the intersection at an entry heading;

the intervening road leads out of the intersection at a first heading;

the exit road leads out of the intersection at a second heading, and the method further comprises the steps of:

20   determining if the second heading deviates from the entry heading more than a threshold; and

responsive to the determining step, including an instruction for the intersection in the set if the second heading deviates from the entry heading more than the threshold.

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14.   The method of Claim 8, wherein the route further comprises an intersection between an entry road, an exit road, and an intervening road, wherein:

the entry road leads into the intersection at an entry heading;

the intervening road leads out of the intersection at a first heading;

5   the exit road leads out of the intersection at a second heading, and the method further comprises the steps of:

determining if the first heading deviates from the entry heading less than a first threshold;

determining if the second heading deviates from the entry heading more than

10   a second threshold; and

including an instruction for the intersection in the set if the first heading deviates from the entry heading less than the first threshold and the second heading deviates from the entry heading more than the second threshold.

15.   A   computer-readable   medium   having   computer-executable instructions for performing steps comprising:

reviewing a driving route to generate a set of driving instructions for the driving route;

5   determining if the driving route comprises a roundabout, a first road that enters the roundabout, and a second road that exits the roundabout, wherein the second road and the first road have distinguishable names, generating a driving instruction that specifically guides a driver through the roundabout;

determining if the route comprises a cloverleaf, a first interstate highway that
10   enters the cloverleaf, and a second interstate highway that exits the cloverleaf, wherein the cloverleaf and the route comprise a ramp coupled between the first interstate highway and the second interstate highway, generating a driving instruction that guides a driver to exit the first highway onto the ramp and to exit the ramp onto the second highway; and

15   determining if the route comprises a first intersection and a second intersection wherein the second intersection is adjacent to the first intersection and wherein the first intersection is within a threshold distance of the second intersection, generating a driving instruction that guides a driver through the first intersection and the second intersection.

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16.   The computer-readable medium of Claim 15, wherein the reviewing step further comprises:

outputting the driving route as a sequence of route components;

processing each route component in the sequence for a first iteration to generate an initial set of driving instructions; and

generating a refined set of driving instructions by processing the initial set of driving instructions for a second iteration.

17.   The computer-readable medium of Claim 15, wherein the reviewing step further comprises reviewing the route with an algorithm that comprises rules based on a human driving perspective.

18.   The computer-readable medium of Claim 17, wherein the rules comprise applying an angular threshold to an intersection in the route wherein the angular threshold is based on a driver's forward-viewing perspective.

19.   The computer-readable medium of Claim 15, further having computer-executable instructions for performing the steps of:

applying an angular threshold to a geometric representation of an intersection in the driving route; and

responsive to the applying step, determining at least one aspect of a driver's perception of the intersection.

20.   The computer-readable medium of Claim 15, further having computer-executable instructions for performing the steps of:

representing a driver's field of view as at least one angle;

comparing a component of the driving route to the at least one angle; and

responsive to the comparing step, including in the set of driving instructions a driving instruction that describes the component of the route on the basis of the field of view.